

REMARKS

In response to the Non-Final Office Action mailed March 16, 2009 (hereafter "Office Action"), claims 24 and 28 have been amended. No new matter has been added. Accordingly, claims 24-37 are pending.

In view of the following comments, allowance of all the claims pending in the application is respectfully requested.

As a preliminary matter, Applicant notes that the Office Action fails to address the status of claim 34-36. This is improper. Indeed, "[i]n every Office action, each pending claim should be mentioned by number, and its treatment or status given." MPEP § 707.07(i). Applicant nonetheless, will assume that these claims remain withdrawn per the previous Restriction Requirement.

Rejection Under 35 U.S.C. § 103

Claims 24-33 and 37 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Publication No. 2002/0126299 to Buchar *et al.* ("Buchar") in view of U.S. Patent No. 6,356,672 to Feng *et al.* ("Feng"). Applicant disagrees with the propriety of this rejection. However, solely to expedite prosecution, Applicant has amended independent claims 24 and 28 to further clarify aspects of the claimed invention.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Office to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Office must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). "[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Indeed, "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) (*citing United States v. Adams*, 383 U.S. 39 (1966)). Rather, the proper test

for obviousness is "... whether the improvement is more than the predictable use of prior art elements *according to their established functions.*" 82 USPQ2d at 1396. (emphasis added).

Claim 24 recites, *inter alia*, the feature of:

a registration parameter detection circuit configured to:
 receive image data comprising a representative sample of the backing surface, the image data *including chrominance values* in the multiple channels for selected pixel locations along a scanline;
 automatically *determine an average chrominance value for each of the multiple channels*;
 select a registration channel from the multiple channels based on the average chrominance values;
 determine *a chrominance deviation* for the registration channel; and
 determine a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.

Similarly, claim 28 recites, *inter alia*, the features of:

obtaining image data comprising a representative sample of the backing surface, the image data *including chrominance values* in multiple channels for selected pixel locations along a scanline;
 determining an average chrominance value for each of the multiple channels;
 selecting a registration channel from the multiple channels based on the average chrominance values;
 determining a chrominance deviation for the registration channel; and
 determining scanned image alignment registration parameters for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.

[Emphasis added].

The cited portions of Buchar and Feng, either alone or in combination, do not teach or otherwise render obvious at least the above-emphasized features of independent claims 24 and 28 for *at least* the reasons that (i) Buchar does not teach using chrominance values for detecting a registration parameter; and (ii) although Feng teaches chrominance values, they are used for an entirely different purpose than Applicant's claimed invention requires.

I. Buchar does not teach using chrominance values for detecting a registration parameters.

Buchar discloses detecting gray level (i.e., luminance) values of the pixels corresponding to the ski for each channel, then performing edge detecting based on the detected luminance value. [See, e.g., Buchar, ¶ 33]. However, Buchar makes no mention or suggestion regarding detecting or using chrominance value, much less "determine[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel."

II. Although Feng teaches using chrominance values for an entirely different purpose than Applicant claimed invention requires.

Further, even assuming, *arguendo*, that it was proper to combine Buchar and Feng (which Applicant does not concede), Applicant submits that the cited portions of Feng do not overcome the deficiencies of Buchar.

For example, the cited portions of Feng make no mention or suggestion of "determin[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel."

The Office Action, though, asserts that Feng teaches chrominance values. [See Office Action, pg. 6]. Even so, Feng teaches using chrominance values for an entirely different purpose than claimed.

For example, Feng teaches using luminance and chrominance channel information to capture accurate color pixel information. Figure 1 of Feng shows pixel misalignment (or misregistration) in a scanned image where chrominance signals have been conventionally derived from R-Y and R-B sensor readings. [See also Feng, col. 1, line 56 – col. 2, lines 9]. This may lead to fringing or blurring of the image. On the other hand, by following the method taught by Feng, color registration error within the scanned image may be reduced. In fact, Feng teaches that the goal of the registration is to produce an accurate RGB or CMYK image output by separately capturing luminance and chrominance values. [See Feng, col. 6, lines 17-19; Figure 4: box 86; and col. 5, lines 32-34].

The cited portions of Feng, however, are silent regarding determining a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel. Instead, in Feng, “*registration*” refers to aligning luminance color pixels with chrominance color pixels to produce a final image. [See Feng, col. 1, lines 7-9 (“a method of refining color registration within the final image”)]. Applicant submits that one could have perfectly aligned color pixels within an image (e.g., as taught by Feng), but that the resulting image may still be poorly registered against the output media. Indeed, these are two different problems.

Thus, Applicant submits that the Office Action fails to demonstrate that the claimed invention is merely a “predictable use of prior art elements *according to their established functions*.” KSR, 82 USPQ2d at 1396 (emphasis). More particularly, neither the cited portions of Buchar nor Feng teach or otherwise render obvious “determin[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.”

By contrast, according to one aspect of Applicant’s invention, the chrominance information may be used to compare against the background surface color. This may be useful, for example, in a CVT reproduction system with a readily detachable scanner backing ski that allows a user to select an appropriate backing for a given application, and may be particular

useful when there is insufficient luminance variation between the input document and the color of the ski in any available channels. [See, e.g., Applicant's Specification, ¶ 8]. The chrominance information in Applicant's claimed invention is not merely being used for aligning pixels within a final image.

* * *

For *at least* the foregoing reasons, Applicant submits that a *prima facie* case of obviousness has not been established and that the cited portions of Buchar, Feng, or a proper combination thereof, fail to disclose or render obvious each and every feature recited by claims 24 and 28. Claims 25-27 and 29-33 and 37 depend from claims 24 and 28, respectively, and are patentable for at least the same reasons provided above related to claims 24 and 28, and for the additional features recited therein. Thus, Applicant respectfully submits that the rejection under 35 U.S.C. §103(a) of claims 24-33 and 37 over Buchar in view of Feng should be withdrawn and the claims be allowed.

Conclusion

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

If an extension of time is necessary to prevent abandonment of this application, then such an extension of time is hereby petitioned for under 37 C.F.R. § 1.136(a). Any fees required (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 240037 (Ref. No. A1667-US-NO/089382-0379237).

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Respectfully submitted,

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